

## Bone Densitometry

### *How to prepare for your DEXA scan*

*Bone densitometry is used to assess your bone health and fracture risk. This handout explains how the scan works, how to prepare for it, how it is done, what to expect during the scan, and how to get your results.*

### **What is bone densitometry?**

We often use X-rays to assess bone fractures and other injuries of the *musculoskeletal system* (skeleton and muscles). But, there is a better way to screen for *osteoporosis* (thinning of the bones) and to measure *bone mineral density* (BMD).

*Dual-energy X-ray absorptiometry* (DEXA) scans are ideal for measuring bone loss. DEXA scans give more accurate results than X-rays and they are quick and painless.

DEXA scans usually measure bone density in the lower spine and hips. But, your non-dominant forearm may be scanned instead if you:

- Have *hyperparathyroidism*
- Have had a hip replacement or spinal fusion, or there is another reason that your lower spine and hips cannot be scanned

### **How does the scan work?**

A DEXA scan uses very low-dose X-ray beams – one with high energy and one with low energy – to measure bone density. The BMD is then put into a database and given a T-score and a Z-score.

### **T-Score**

This number shows the amount of bone you have compared to a young adult of your same *gender* (sex) with peak bone mass.



*For your DEXA scan, you will lie on a padded table. A sensor arm will pass over the area being scanned.*

A T-score result:

- **Above -1** is considered normal.
- **Between -1 and -2.5** shows *osteopenia*, the first stage of bone loss. Osteopenia means that there is an increased risk for fracture.
- **Below -2.5** shows osteoporosis. Osteoporosis usually means there is a high risk for fracture.

### **Z-Score**

This number shows the amount of bone you have compared to other people in your age group who are your same size and gender. If your Z-score is below -2.5:

- You have secondary osteoporosis.
- You may need more medical tests.

### **How should I prepare?**

- Eat your meals as usual.
- Do **not** take calcium supplements for at least 24 hours before the exam.
- Wear loose-fitting, comfortable clothing.
- **Do not wear any metal zippers or metal buttons.**
- Tell your doctor if you recently:
  - Had a barium exam
  - Received *contrast* (X-ray dye) for a *computed tomography* (CT) or *radioisotope* scan

If you have had one of these exams recently, you may need to wait 10 to 14 days before having a DEXA scan.

- **Women:** Tell your doctor or X-ray technologist if there is any chance you may be pregnant.

### **What should I expect?**

- We may ask you to undress and put on *scrubs* (top and pants often worn by nurses).
- **If your spine or hips are being scanned**, you will then lie on a padded table. The table has an X-ray source below it and a sensor above it.

The technologist will then help position you for the scan:

- If your spine is being scanned, your legs will be straight and your pelvis and lower spine will rest on the table.
- If your hips are being scanned, the technologist will strap your feet to a wedge. Your legs will be rotated slightly inward.
- **If your forearm is being scanned**, you may either lie down or sit in a chair. The forearm scan lasts only about 30 seconds.
- The sensor will slowly pass over the area being scanned. It will send an image to a computer.
- The full body scan takes about 10 minutes. The time depends on the equipment used and the parts of your body that are scanned.

### What will I feel during the scan?

- DEXA scans are painless and *non-invasive* (do not require any incisions).
- While you are lying on the table, we may ask you to hold an awkward position for a few minutes, while the sensor arm passes over your body.
- You must stay as still as you can during the scan. This will help create a clear image of your bones.
- You do **not** need to have *sedation* (medicine to help you relax) or *anesthesia* (medicine to make you sleep) for this scan.
- Radiation exposure from the scan is very low.

### Who interprets the results and how do I get them?

The radiologist will not talk with you about the results. A *metabolic bone disease specialist* or a *board certified radiologist* will review your DEXA exam. After they interpret your results, they will send a report to the provider who ordered the exam or to your primary care provider, or both. Results are usually ready within a few days.

You may also read your results on your eCare Results page. If you need copies of your images on disc, call 206.598.6206.

Your providers will then work with you to create a treatment plan as needed.

#### Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

- UWMC Imaging Services: 206.598.6200
- Harborview Imaging Services: 206.744.3105